### DOCUMENT RESUME

ED 280 840 SP 028 770

AUTHOR Freeman, Donald; Loadman, W. E.

TITLE Recommendations for Doctoral Guidance Committees
Suggested by Follow-Up Studies at Two Universities.

Research and Evaluation in Teacher Education: Program

Evaluation Series No. 7.

INSTITUTION Michigan State Univ., East Lansing. Coll. of

Education.

PUB DATE Apr 85 NOTE 23p.

PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS \*Doctoral Programs; Graduate Study; \*Graduate

Surveys; \*Guidance; Higher Education; \*Program

Evaluation; Program Improvement; Research

Methodology; Research Reports; \*Student Attitudes;

\*Teacher Education

IDENTIFIERS \*Michigan State University; \*Ohio State University

### **ABSTRACT**

Analysis of followup studies of graduates of College of Education doctoral progams at Ohio State and Michigan State universities considered alumni perceptions of doctoral guidance committee activities in planning course work, preparing and administering comprehensive evaluations, and guiding dissertation research. Questionnaire responses from a total of 676 graduates from both programs were analyzed. Although demographic characteristics of the two groups differed significantly, most findings were consistent across both institutions in such areas as satisfaction with quality of assistance; evaluation of and satisfaction with course work; preparation for comprehensive examinations; and need for more preparation in research methodology for completion of their dissertations. Some striking contrasts were also found in such areas as the number of articles published based on their dissertations. Recommendations for guidance committees stemmming from survey responses include: (1) encouraging students to take meaningful coursework outside of the college of education; (2) ensuring that students get enough background in research methodology; (3) providing a clear sense of the content that will be tested in examinations; (4) maintaining high standards and offering constructive feedback to students when evaluating their performance; and (5) adding members, if necessary, to the guidance committees to ensure expertise in fields like research methodology and theory. (CB)



# Research and Evaluation in Teacher Education

Program Evaluation Series No.7

RECOMMENDATIONS FOR DOCTORAL GUIDANCE COMMITTEES SUGGESTED BY FOLLOW-UP STUDIES AT TWO UNIVERSITIES



Department of Teacher Education and Office of Program Evaluation

BEST COPY AVAILABLE

"PERMISSION TO REPRODUCE TIMES MATERIAL HAS BEEN GRANT!

B. West

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it.
- Minor changes have been made to improve reproduction quality.
- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.



Publication of ...

The Office of Program Evaluation College of Education Michigan State University

April, 1985

Program Evaluation Series No.7

RECOMMENDATIONS FOR DOCTORAL GUIDANCE COMMITTEES SUGGESTED BY FOLLOW-UP STUDIES AT TWO UNIVERSITIES

D.J. Freeman Michigan State University

& W.E. Loadman The Ohio State University



### Abstract

This investigation provided a comparative analysis of results of follow-up studies of graduates of doctoral programs at The Ohio State and Michigan State Universities. The same questionnaire survey and similar sampling procedures were used in both settings. The survey considered alumni perceptions of guidance committee activities, course work, comprehensive examinations, and dissertations. Most findings were consistent across both institutions (e.g., about one-fifth of the graduates from both universities wish they had taken more course work in research methodology). However, some striking contrasts were also found (e.g., the proportion of graduates who published articles based on their dissertations was 40% at one university and 23% at the other). The report offers recommendations for doctoral guidance committees suggested by the findings.



Recommendations for Doctoral Guidance Committees
Suggested by Follow-Up Studies at Two Universities

Doctoral guidance committees often exercise considerable autonomy in structuring the graduate studies of individual Ph.P. candidates. It is not uncommon for these committees to have a decisive influence on decisions regarding the course work each candidate will complete, the format and content of comprehensive examinations, and the substance and methodology of doctoral dissertations. Given this potential sphere of influence, it is somewhat surprising that feedback and advice from former students seldom play a prominent role in the development of guidelines and policies that shape guidance committee activities. For whatever reasons, follow-up studies of Ph.D. programs which might serve as a source of guidance for policy makers are rarely reported in the literature. Major studies of this type that have been reported are more concerned with describing the national status of advanced degree programs in education than with identifying specific ways in which doctoral programs might be improved (e.g., Brown, 1966, Schneider et al., 1984).

This investigation provides a comparative analysis of the results of follow-up studies of graduates of doctoral programs in Colleges of Education at two universities - Michigan State University (MSU) and The Ohio State University (OSU). Both of these studies were designed to provide feedback to faculty and administators directed toward modifications and improvements in graduate programs. The same survey



questionnaire (Freeman and Byers, 1982) and comparable sampling plans were used at both universities. These procedures provided a comparative baseline for interpreting the advice of alumni at each institution.

The basic purpose of this report is to describe alumni perceptions of the role of doctoral guidance committees in planning programs of study, preparing and administering comprehensive examinations, and guiding dissertation research. The fact that guidance committees at Ohio State and Michigan State typically have a strong voice in designing graduate programs of study is an important condition to consider when interpreting the findings. Because the data were gathered in two university contexts, the report will emphasize results that are likely to generalize beyond a single university setting. Recommendations suggested by these results should facilitate improvements in guidance committee performance in comparable universities throughout the country.

### Procedures

### <u>Sample</u>

During fall term, 1982 questionnaire surveys were mailed to a census of all individuals who graduated from doctoral programs at Michigan State University during a five year period, beginning with the 1976-77 academic year and ending with the 1980-81 academic year. During spring term, 1983 the same questionnaire was sent to all who graduated from Ph.D. programs at The Ohio State University from summer quarter, 1978 through fall term, 1982. Because the sampling frames were somewhat different, the average time lag between graduation and survey administration was greater at MSU than at CSU. This difference should be considered when interpreting responses that might be expected to vary as a function of length of time



since graduation (e.g., current salary).

Two mailings at each institution resulted in returns from 365 graduates (57%) from one institution and 311 graduates (58%) from the other. Because participants sometimes chose to skip questions, sample sizes were usually somewhat smaller than these two figures and varied slightly from one analysis to the next.

Contrary to what one might expect, the demographic characteristics of the two groups differed in significant ways. For example, relative to their Ohio State counterparts, Ph.D. alumni from Michigan State were more likely to be males (70% vs. 53%) and to have relied on a full-time job to finance their graduate studies (55% vs. 26%). More important, there were substantive differences in the major fields of study represented in the two samples. Whereas 39% of the Michigan State sample earned Ph.D.s in K-12 administration or higher education, only 13% of the Ohio State graduates majored in these two fields. On the other hand, 18% of the graduates in the Ohio State sample and only two percent of the Michigan State alumni earned Ph.D.s in physical or vocational education.

These and other striking differences in sample characteristics suggest that the two university contexts should not be viewed as equivalent when interpreting results of analyses considered in this report. This is particularly important when interpreting similarities in findings across the two institutions.

Results

### Overview:

Given the basic purpose of this report, the analyses which follow will tend to emphasize dimensions where there was the greatest room for



improvement in guidance committee performance. It is therefore important to recognize from the outset that Michigan State and Ohio State alumni were generally very satisfied with their guidance committees and with the quality of all facets of their graduate programs. Sixty percent agreed or strongly agreed that they were better qualified for their current position than graduates of comparable advanced degree programs at other institutions; less than ten percent disagreed with this statement. It is also important to recognize that since the years considered in the study, there have been major changes in graduate programs and policies at both institutions.

For obvious reasons, university identities will not be revealed in all descriptions that follow. Rather, the two univerities will sometimes be referred to as ASU and BSU.

# Doctoral Guidance Committees:

With one exception, survey participants were very satisfied with the quality of assistance they received from their doctoral guidance committees. For example, about two-thirds of the alumni from both universities rated their committees as "exceptional" or "strong" in providing constructive criticism regarding the design of their dissertation study and in pressing them for professional excellence. On the other hand, a relatively high percentage of those who looked to their committees for assistance in finding jobs were disappointed by their committee's response. Fifty-six percent of the graduates from ASU who needed jobs rated their committee as "inadequate" or "weak" in providing assistance in finding employment. The comparable figure for BSU graduates



was 37%.

Two items on the questionnaire asked graduates if there were at least one individual on their committee who was "thoroughly versed in the research methodology" used in their dissertation study and at least one member who had "expertise in the theory/professional literature" on which their dissertation was based. Using responses to these two questions as a guide, it was possible to identify graduates who had worked with "complete" committees (i.e., committees that satisfied both conditions) and alumni who had worked with "incomplete" committees (i.e., committees that failed to satisfy at least one of the two conditions). About 19% of the respondents in the BSU sample and 22% of the ASU alumni had worked with incomplete committees.

The data in Table 1 describe the results of a series of exploratory analyses that examined potential relations between committee composition and graduates' ratings of committee performance. As these data indicate, ratings at both universities were consistently higher for "complete" than for "incomplete" committees across all areas of performance cited on the survey. As shown in the columns labeled "t," t-tests indicated that these differences were statistically significant at both universities (with the probability of a Type I error fixed at .05 at each institution).

### Insert Table 1 about here

In interpreting these results, it is important to consider that these statistical tests do not provide evidence of causality and do not



even describe the direction of the relation between the two variables. It is possible, for example, that relative to those who had negative feelings about their graduate studies, individuals with positive feelings were more lenient when making judgments about whether their committee included individuals with theoretical and methodological expertise.

Nevertheless, we believe that these data provide adequate support for recommending that stronger measures should be taken at both institucions to ensure that virtually all guidance committees include members who have expertise in the methodology and subject matter of the candidate's dissertation.

## Ph.D. Course Work:

One of the most informative sections of the questionnaire asked survey participants to identify the number of courses they completed in their doctoral programs that focused on each of 36 curricular areas (e.g., teacher education). Participants were then asked, "If you were beginning your graduate program now, how would you alter the number of courses you would take in each area so that you would be in a better position to satisfy your current professional goals?" By checking the appropriate spaces on their questionnaire booklet, alumni indicated that they would take more courses, less courses, or the same number of courses in each of the 36 areas. Despite substantive differences in the major fields of Ph.D. study among graduates in the Michigan State and Ohio State samples (see earlier description of the samples), the results were very consistent across both institutions. Therefore, even though we do not have data from other universities, we suspect that the findings will



generalize to a variety of university contexts.

In general, graduates from both universities were satisfied with the number of courses they had taken in each of the 36 curricular areas. Across all areas, at least two-thirds of the respondents in both samples indicated that if they were starting over again, they would not change the number of courses they had taken in a given field. Curricular areas in which a majority of Ohio State graduates took one or more courses are described in Part A of Table 2. The seven areas in which Michigan State graduates were most likely to have taken courses are also shown in this portion of the table. Five curricular areas on these two lists overlapped. They were: statistics and research design, measurement/ evaluation, philosophy of education, program evaluation and learning systems design/development.

# Insert Table 2 about here

Although most graduates were satisfied with the number of courses they completed in each area, it should be noted that many wished they had taken more courses in certain areas. These are identified in Part B of Table 2. Once again there was a remarkable similarity in the curricular areas that were identified at Ohio State and Michigan State. Between 17 and 25 percent of the graduates from both institutions wished they had taken more course work in program evaluation, statistics and research design, learning systems design and development, measurement/evaluation, and field methods/ethnography.

There is an obvious everlap between the list of areas in Part B of



Table 2 and those described in Part A. It would appear from these two sets of data that even though Ph.D. guidance committees at both institutions encouraged students to take courses in research methodology, they often underestimated the number of courses required to establish a working knowledge in these fields.

Feedback from graduates also identified one other area that should concern guidance committees when planning programs of study. In the eyes of Ph.D. graduates, the proportion of coursework completed outside the College of Education was often too low. The median number of non-College of Education courses completed by Michigan State graduates was 5.2; the corresponding figure for the Ohio State sample was 8. Yet, nearly two-thirds of the alumni from both universities represed that if they had it to do over again, they would have taken more courses outside the College of Education. About one-fourth said they would have taken alot more courses of this type.

### Comprehensive Examinations:

At the time of the study, neither univerity had a college-wide policy governing the design and administration of comprehensive examinations. With the exception of a few departments and program areas where consistent practices were followed, guidance committees had a free hand in shaping examination procedures. Nevertheless, there were clear differences in the ways in which comprehensive examinations were typically administered at the two institutions. For example, whereas ninety-four percent of the BSU alumnity both oral and written exams, only 16% of the ASU graduates were tested in this way. Most ASU graduates



(80%) took written exams only. In addition, in contrast to only 58% of ASU graduates, 76% of the BSU alumni agreed that their "study efforts were guided by a clear sense of what would be covered on the exams."

Relative to their ASU counterparts, BSU graduates also: (a) spent more time preparing for their comprehensive exams (median = 5.6 weeks vs. 4.6 weeks), (b) were more likely to agree that they received constructive feedback regarding their performance (74% vs. 42%), and (c) were more likely to pass the exams the first time they took them (98% vs. 89%).

Although this set of questions asked respondents to describe their perceptions of how committees functioned, we believe that the variation in responses that occured reflected actual differences in committee practices at the two institutions. Given this assumption, it is important to consider that a higher percentage of BSU than ASU graduates agreed that "preparing for comprehensive exams was a useful learning experience" (79% vs. 66%). This finding raises a question of whether differences in format (oral and written vs. written only), level of guidance regarding content to be tested, length of preparation time, and level of feedback regarding a candidate's performance result in differences in perceptions of the educational value of comprehensive examinations. The results of exploratory analyses contrasting perceptions of the educational value of comprehensive exams for different conditions on each of these variables are presented in Table 3. To control for an obvious source of bias, only those graduates who passed comprehensive examinations in their major field the first time they took them were included in these analyses. With this restriction, there were 266 graduates in the ASU sample and 354 alumni in the BSU sample.



# Insert Table 3 about here

As these data indicate, the format of the exam was the only predictor variable that was not signficantly related to perceptions of the educational value of comprehensive examinations. In general, those who agreed that (a) the content of the exam was clearly specified and (b) they received constructive feedback regarding their performance were more likely to agree that preparing for the exams was a useful learning experience than was true of those who did not feel that their comprehensive exams had these characteristics. There was also a direct relationship between perceptions of the educational value of comprehensive examinations and the length of time candidates spent preparing to take them. Once again, it is important to recognize that these results do not provide evidence of causal relationships.

Nevertheless, we are convinced by these analyses that guidance committees should pay close attention to these variables when constructing, administering, and evaluating comprehensive examinations.

As noted earlier, a majority of graduates at both institutions reported spending the equivalent of less than five and one-half weeks (40 hour workweeks) preparing for their comprehensive exams. It is unlikely that these reports underestimate the amount of time graduates actually spent on this task. Yet, at both institutions the probabilities were extremely high that students would pass these tests the first time they took them (BSU = 98%; ASU = 89%). Given these findings, we believe that the graduate faculties at both institutions should question whether it is



possible for a majority of students to realize the intended goals of comprehensive examinations in less than five and one-half weeks of study. If not, adjustments should be made in stated purposes or in examination procedures.

# Dissertations and Research Publications:

In contrast to the section of the questionnaire that dealt with comprehensive examinations, there were striking similarities in how Michigan State and Ohio State graduates responded to questions dealing with dissertations and research publications. This pattern of results is perhaps best illustrated by responses to an item calling for graduates to describe the nature of their dissertation research (see Table 4). Despite clear differences in major fields of study represented by the Ohio State and Michigan State samples, there were consistent inter-instituted similarities in the percentages of students who completed each type of dissertation study cited in the survey.

### Insert Table 4 About Here

As described earlier, there were also clear similarities in how alumni from both universities rated guidance committee performance in areas related to the design and implementation of the dissertation study (see Table 1). It should also be recalled that those who worked with committees that included at least one member who was thoroughly versed in theory and one who had expertise in the research methodology used in the dissertation study rated their committees' performance higher than those



who worked with "incomplete" committees. It is therefore interesting to note that there was no relationship between committee composition and the average length of time it took graduates to complete their dissertations. Regardless of whether one worked with a "complete" or an "incomplete" committee, it took an average of about 54 workweeks (40 hours per week) to finish the disseration at Michigan State and 52 workweeks at Ohio State. Once again, these two figures were very similar and represented estimates of the total length of time it would have taken to complete the disseration if candidates had devoted full-time to this task.

Sixty-one percent of the Ohio State sample and 56% of the Michigan State alumni reported that they were "thoroughly prepared" in the methodology used in their dissertations. However, a disproportionately high percentage of those who had relatively weak backgrounds in methodology worked with "incomplete" committees. At Ohio State, the proportion of graduates who said they were thoroughly prepared in their dissertation's methodology was much lower for graduates who worked with incomplete committees than for alumni who worked with complete committees (39% vs. 66%). At Michigan State, the corresponding figures were 41% and 62%. These results provide strong testimony for our earlier recommendation regarding committee composition.

With one exception, there were also striking similarities in the proportion of graduates who participated in each of the areas of publication cited on the survey. Since graduation, 50% of Michigan State's alumni and 49% of Ohio State's graduates have presented at least one paper at a national conference. Likewise, the percentages of graduates who have published one or more articles in a refereed journal



(Ohio State = 31%; Michigan State = 29%) or who have written at least one contract/grant proposal (Michigan State = 47%; Ohio State = 43%) were very similar.

On the other hand, the proportion of BSU alumni who used the findings of their dissertations as the basis for publishing one or more articles in professional journals (not necessarily refereed) was nearly double the corresponding figure for ASU (40% vs. 23%). This contrast suggests a clear difference in normative expectations regarding the publication of dissertation findings at the two institutions. However, given our views on the role of dissertations in graduate studies, we believe these percentages should have been higher at both universities. Because candidates spent the equivalent of one full year completing their dissertation research, it does not seem unreasonable to expect that with well chosen topics and stronger encouragement, more than 40% of the graduates would have reported their findings in the professional literature.

### Recommendations

The following recommendations are intended to capture the advice of alumni to doctoral guidance committees in Colleges of Education at Michigan State and Ohio State Universities:

- 1. When assisting individuals in planning their Ph.D. course work, guidance committees should ...
  - (a) ensure that candidates take a sufficient number of courses to acquire a working knowledge of the research methodology/inquiry skills they are likely to use in their professional roles.
  - (b) encourage candidates to take courses outside the college of education that will make a substantive contribution



to their graduate programs of study.

- When designing and administering comprehensive examinations, guidance committees should be guided by a clear concept of the role(s) and function(s) of these exams and should strive to enhance perceptions of their educational value by ...
  - (a) providing a clear sense of the content that will be tested.
  - (b) maintaining high standards and offering constructive feedback when evaluating the performance of each candidate.
  - (c) actively encouraging students to spend an adequate amount of time preparing for the exams.
- When assisting candidates in the design and conduct of dissertation studies, guidance committees should...
  - (a) add members, if necessary, to ensure that the committee includes at least one individual who has expertise in...
    - the research methodology used in the dissertation
    - the theory and professional literature supporting the study.
  - (b) take an active role in...
    - assisting the candidate in selecting a worthwhile topic
    - promoting the importance of publishing the findings.

These recommendations reflect the perceptions of alumni who have completed doctoral programs at Michigan State and Ohio State Universities. Nevertheless, we are convinced that their application will lead to improvements in guidance committee performance at comparable universities throughout the country.



### References

- Brown, Laurence (1966). The doctorate in teacher education: Implications for the preparation of coilege teachers in education.

  Frontiers of teaching: AACTE Yearbook, 264-292.
- Freeman, Donald J. & Byers, Joe L. (1982). Survey of graduates of Ed.S.

  Ed.D., and Ph.D. programs at Michigan State University. East

  Lansing, MI: Office of Program Evaluation, College of

  Education.
- Schneider, B.L., Brown, L., Denny, T., Mathis, B.C., & Schmidt, W.,

  (1984). The deans' perspective on the status of doctoral

  programs in schools of education. Phi Delta Kappan. 45 (9),

  617-620.



Table 1

Tests of Differences in Mean Ratings of Guidance Committee

Performance as a Function of Committee Composition

<u>BSU</u> :			·	ASU:		
Complete (n=278)	Incomplete (n=65)	e t		Complete (n=226)	Incomplete (n=65)	t
3.69 (1.06)	3.35 (1.17)	2.09*	(a) Assisting in planning your program of study (schedule of courses).	3.73 (1.01)	3.22 (1.10)	3.39**
4.04 (0.88)	3.77 (0.79)	2.48*	(b) Writing and reviewing your comprehensive exams.	3.67 (0.94)	3.21 (1.10)	2.96**
4.12 (0.96)	3.67 (1.07)	3.07**	(c) Pressing you for professional excellence.	4.02 (0.95)	3.32 (1.24)	4.21**
J.08 (1.33)	2.52 (1.41)	2.39*	(d) Assisting you in finding a job.	2.57 (1.29)	1.98 (1.22)	2.70**
3.99 (1.09)	3.41 (1.08)	3.88**	(e) Providing constructive feedback regarding the design of your dissertation study.	4.11 (0.99)	3.33 (1.18)	4.82**
4.00 (1.13)	3.53 (1.13)	3.00**	(f) Providing guidance and constructive feedback during execution and writing of the dissertation.	4.03 (1.13)	3.25 (1.27)	4.39**

Notes. Meán ratings based on a 5-point scale where 1 = inadequate, 2 = weak, 3 = adequate, 4 = strong, and 5 = exceptional.

 ${\tt Numbers}$  in parentheses are standard deviations

Sample sizes cited in parentheses are maximum n's. Because each item had a "does not apply" option, samples were slightly smaller for most analyses; they were considerably smaller for category "d" where the complete and incomplete groups had n's of 188 and 44 at BSU and 136 and 42 at ASU.



<sup>\*</sup> p<.05

<sup>\*\*</sup> p<.01

Table 2
Descriptions of Course Work

A. Curricular Areas in Which Graduates Were Most Likely To Have Completed at Least One Course

# Ohio State

# Michigan State

statistics/research design measurement/evaluation philosophy of education program evaluation field methods/ethnography learning systems design curriculum & instruction	(94%) (80%) (61%) (61%) (58%) (55%)	statistics/research design measurement/evaluation philosophy of education educational psychology program evaluation higher education	(96%) (87%) (76%) (73%) (73%) (60%)
curriculum & instruction	(51%)	learning systems design	(58%)

B. Areas in Which Graduates Were Most Likely To Wish They Had Taken More Courses

# Ohio State

# Michigan State

statistics/research design program evaluation learning systems design instructional media field methods/ethnography measurement/evaluation	(26%) (24%) (21%) (21%) (19%) (19%)	program evaluation politics of education learning systems design field methods/ethnography statistics/research design measurement/evaluation	(27%) (21%) (60%) (18%) (17%) (17%)
--	--	--	--

Note: The percent of alumni who took courses in each area (Part A) or who reported a desire to have taken more courses in a given field (Part B) are also shown.



Table 3

Tests of Differences in the Perceived Educational Value of Comprehensive Examinations as a Function of Selected Exam Characteristics

	,				
		ASU:		BSU:	
a.	Format:	Means	3 :		
	writ <b>t</b> en	3.82	(n=212)	4.00	(n=19)
	written & oral	3.93	(n=41)	4.10	(n=325)
		F-I	Ratio=1.45	F-F	Ratio=0.13
b.	Exam Content was Clearly Specified:				
	agree	4.25	(n=163)	4.25	(n=262)
	neutral	3.42	(n=38)	3.64	(n=43)
	disagree	2.95	(n=58)	3.51	(n=38)
		F-I	Ratio=39.13**	F-F	Ratio=16.10**
c.	<u>Candidate Received Constructive</u> <u>Feedback on Performance</u> :				
	agree	4.14	(n=112)	4.29	(n=251)
	neutral	3.75	(n=44)	3.58	(n=43)
	disagree	3.54	(n=100)	3.48	(n=50)
		F-F	Ratio=7.79**	F-F	Ratio=22.91**
d.	Number of Weeks of Preparation:				
	7 or more	4.04	(n=72)	4.24	(n=131)
	4 - 6	3.92	(n=78)	4.14	(n=137)
	3 or less	3.62	(n=109)	3.68	(n=74)
		F-F	Ratio=3.29*	F-I	Ratio=8.48**

Notes: Means based on a 5-point Likert scale where 5 = strongly agree and 1 = strongly disagree that preparing for comprehensive exams was a useful learning experience.

- \* p<.05
- \*\* p<.01



Table 4

Percent of Graduates Who Completed Various

Types of Dissertation Research

	Ohio State:	Michigan State:
(a) Historical research	6.2	5.3
(b) Case study	4.2	5.0
(c) Descriptive investigation	36.4	33.9
(d) Ethnography/field study	6.8	3.7
(e) Correlational study	10.2	10.6
<pre>(f) Experimental/quasi- experimental study</pre>	26.3	31.2
(g) Program evaluation	2.5	4.3
(h) Other	7.3	6.0

